1 INTRODUCTION

This document is the Work Plan for the remedial investigation and feasibility study (RI/FS) of Little Squalicum Park (the Park) located in Bellingham, Washington (Figure 1-1). The Work Plan describes the project management strategy for implementing and reporting on RI/FS activities for the site, including a description of individual RI/FS tasks and subtasks. The Work Plan also describes the RI/FS schedule, project team, project responsibilities, and reporting requirements. Elements and design of the RI/FS are detailed in the sampling and analysis plan (SAP) and quality assurance project plan (QAPP), which also describe specific field and laboratory procedures, respectively.

Integral Consulting Inc. (Integral) is conducting this work under contract No. 2004-014 with the City of Bellingham, Parks and Recreation Department (City), with direction from the Washington State Department of Ecology (Ecology) Toxics Cleanup Program and the U.S. Environmental Protection Agency, Region 10 (EPA) Brownfields Program.[1] This Work Plan has been prepared in general accordance with an *Agreed Order* and Statement of Work (SOW) negotiated between the City and Ecology on March 22, 2005 (Document No. DE 2016). The *Agreed Order* and SOW are presented in Attachment A of this Work Plan.

This Work Plan meets the requirements of the EPA Brownfields Program and represents an expanded revision of the August 26, 2004 interim version originally prepared for EPA (City of Bellingham 2004). The *Cooperative Agreement* between the City and EPA dated September 16, 2003 is presented in Attachment B of this Work Plan.

Several documents are cited repeatedly and accompany this Work Plan. Altogether, these documents are referred to as the Work Plans for the Park RI/FS:

- *Sampling and Analysis Plan for the RI/FS of Little Squalicum Park, Bellingham, Washington.* The SAP describes the sampling strategy and design to meet the data needs of the RI/FS and provides specific guidance for field methodology and quality assurance procedures that will be followed by Integral and its subcontractors.
- *Quality Assurance Project Plan for the RI/FS of Little Squalicum Park, Bellingham, Washington.* The QAPP describes laboratory methodology and quality assurance/quality control (QA/QC) procedures that will be used to complete the RI/FS for the Park site.

[1] Funding for this work was received by the City of Bellingham (2004) from the EPA Brownfields Program. Additional funding is expected from the Ecology Remedial Action Grant Program (City of Bellingham 2005).

- *Project Health and Safety Plan, Little Squalicum Park RI/FS, Bellingham, Washington.* The HASP has been prepared in conformance with Integral's Health and Safety Plan guidelines and in accordance with Washington Administrative Code (WAC) 173-340-810, applicable Washington Industrial Safety and Health Act (WISHA) regulations, and project requirements. It addresses those activities associated with work to be performed in the Park.
- *Integral Standard Operating Procedures* (SOPs). These numbered documents provide specific, detailed information on conducting routine, repetitive field techniques (e.g., split-spoon sampling from a drill rig). These documents are found in Appendix A of the SAP.

1.1 PROJECT BACKGROUND

Little Squalicum Park consists of 32 publicly owned acres located within the Birchwood neighborhood and adjacent to Bellingham Technical College (BTC) (Figure 1-1). Little Squalicum Creek (the Creek) and the Park are currently used for passive recreational activities and as wildlife habitat. Since the 1980s, development plans by the City have called for enhancing the passive recreational activities at the Park by constructing trail and park facilities, realigning the Creek inside the park, and enhancing fish and wildlife habitat. Two major trails have been improved and presently pass through the park on old railroad and road corridors. Since the 1990s, local, state, and federal funds have been budgeted, but development plans were put on hold due to concerns voiced by EPA, Ecology, Whatcom County Health Department, and the public that the creek and adjacent areas may be contaminated. Public investments have been limited to maintaining the major historic trails that have been used by the public for over 25 years.

In 2002, EPA completed an RI/FS for the OESER Company Superfund site located approximately 500 ft upgradient from the park (E&E 2002a, b). Portions of the Park area were included in that study. EPA reported to the City that they did not find contamination on park property that would require cleanup actions under the Superfund Program. Further, it would be the City's responsibility to conduct additional environmental studies necessary for the proposed park development.

Significant questions regarding the nature and extent of contaminants on the site remain unanswered and overshadowed decisions to enhance and develop the park and trail system. EPA Superfund Program staff recommended that the City seek EPA Brownfields assessment funds for any additional investigation within the park boundaries.

The City applied for an EPA Brownfields assessment grant in 2002/2003. This additional funding was to be used to determine the nature and extent of contamination within the Park area as it related to actual park development plans. As part of the assessment, four potential sources of contamination would be investigated:

- Wastewater and stormwater discharges from the OESER Company
- Non-point stormwater discharges from the Birchwood neighborhood and Marine Drive
- Reported pesticide use along the Burlington Northern Santa Fe (BNSF) railroad right-of-way
- Former gravel mining in the creek ravine.

The City was awarded Brownfields assessment funding in September 2003. The *Cooperative Agreement* between the City and EPA is presented in Attachment B.

The assessment work funded under the EPA Brownfields grant specifically excludes portions of the site owned by the City. EPA has determined that environmental assessment work on City-owned properties extends beyond the granting authority of the Brownfields program. Consequently, the City must limit the use of the Brownfields grant funds to the properties in the project area that are not owned by the City, such as the properties owned by Whatcom County, Port of Bellingham, and BNSF (refer to Figure 1-1). Eligible properties represent approximately 65% of the designated park area with the remaining 35% area owned by the City and considered ineligible.

The Park was listed on Ecology's Confirmed and Suspected Contaminated Sites List on January 14, 2004. It had been listed earlier as part of the Oeser Company site, located upgradient from the proposed Park (Ecology 2004). Whatcom County Health and Human Services completed a site hazard assessment (SHA) of the Park site in February 2004, as required under the Model Toxics Control Act (MTCA). The site's hazard ranking, an estimation of the potential threat to human health and/or the environment relative to other Washington State sites assessed at that time, was determined to be a 1, where 1 represents the highest relative risk and 5 the lowest (Ecology 2004). Based on the results of the SHA, Ecology and the City elected to enter into an agreement for the development of an RI/FS pursuant to WAC 173-340-350 and WAC 173-204-560. Ecology recently negotiated an *Agreed Order* (DE-2016) with the City to conduct an RI/FS of the Park site (dated March 22, 2005). The *Agreed Order* and *SOW* are presented in Attachment A.

The RI/FS will include an assessment of all properties within the Park, both eligible and ineligible under the Brownfields grant. Consequently, the City needed to find other (non-EPA Brownfields) sources of funding to complete the project. In March 2005, the City applied for an Ecology Remedial Action Grant to complete the RI/FS tasks for this project. Ecology approved the grant application on April 27, 2005. The EPA Brownfields award will be the source of matching funds required under the Ecology grant.

1.2 REGULATORY FRAMEWORK

The RI/FS for the Park will be conducted under MTCA (WAC 173-340), which addresses identification and cleanup of contamination in soils, surface water, and groundwater. For contamination in sediments, MTCA refers to the Sediment Management Standards (SMS) (WAC 173-204), which includes standards for marine sediments. Since standards for freshwater sediment are "Reserved" under WAC 173-204-340, the City has been coordinating with Ecology during the development of these project work plans in order to clarify site-specific requirements.

Additional regulations that are Applicable or Relevant and Appropriate Requirements (ARARs) include the following:

- Federal Clean Water Act and National Toxics Rule [40 Code of Federal Regulations (CFR) 131], which provide water quality criteria (WQC) for protection of human health and aquatic organisms
- Water Quality Standards for Surface Water of the State of Washington (WAC 173-201A), which also provides WQC for protection of aquatic organisms
- Ecology's (2003) Freshwater Sediment Quality Values (SQVs), which cover contamination of freshwater sediments. The SQVs are currently guidelines and do not replace bioassays as the definitive determination of sediment toxicity.
- Federal Safe Drinking Water Act (40 CFR 141), which provides maximum contaminant levels (MCLs) for protection of drinking water
- Washington State Department of health rules for Public Water Supplies (WAC 246-290-310), which also provides MCLs.

EPA's (1990) guidance on soil cleanup levels for PCBs could be an ARAR, although PCBs are not anticipated to be a chemical of concern in the Park. The Federal and State MCLs are listed as ARARs pending further investigation, which might conclude that hydrologic connections with Bellingham Bay render the groundwater unsuitable for drinking. Additional regulatory values used for screening data are discussed in the SAP.

MTCA addresses sites with contaminated soils, groundwater, or surface water in Washington State. The regulation establishes a process for managing contaminated sites, from the discovery phase through cleanup. The RI/FS, for which this Work Plan is designed, generates the data necessary to confirm whether the site requires cleanup and to design the cleanup action (if necessary). If it is determined during the RI/FS that cleanup is warranted, the next step is to develop a cleanup action plan that must comply with several requirements, including protection of human health and the environment, compliance with cleanup standards and ARARs, and provisions for compliance

monitoring. The cleanup phase involves design, construction, operation, and monitoring of cleanup activities. At the Park, the cleanup phase would likely be performed in conjunction with park enhancement activities.

The SMS establish standards for the quality of surface sediments, apply those standards as the basis for management and reduction of pollutant discharges, and provide a management and decision process for the cleanup of contaminated sediments. Part V of the SMS, Sediment Cleanup Standards, establishes procedures and criteria to identify, prioritize, and clean up contaminated surface sediment sites.

1.3 WORK PLAN ORGANIZATION

The remaining sections of this Work Plan include the following sections and two appendices:

- **Section 2: Project Objectives.** Identifies the major project objectives for the RI/FS and the redevelopment of the Park.
- **Section 3: Project Management Strategy.** Describes the project tasks and subtasks for the RI/FS and the proposed schedule to complete these tasks.
- **Section 4: Project Team and Responsibilities.** Identifies the organizations and key individuals that will oversee and implement the RI/FS, along with their respective responsibilities.
- **Section 5: References.** Provides full citations for all references cited in the Work Plan.
- **Attachment A: Agreed Order – Little Squalicum Park – Signed March 2005.** Presents a copy of the *Agreed Order* and *SOW* negotiated between the City and Ecology.
- **Attachment B: Cooperative Agreement – EPA Brownfields Program.** Presents a copy of the *Cooperative Agreement* negotiated between the City and EPA.

2 PROJECT OBJECTIVES

This section of the Work Plan presents major project objectives for the RI/FS and potential redevelopment of the Park. The RI/FS is intended to provide sufficient data, analysis, and evaluations to enable Ecology to select a cleanup action alternative for the site (refer to the *Agreed Order* and Statement of Work in Attachment A). The selected cleanup action will be coordinated with potential redevelopment of the Park. Project objectives include the following:

- Provide critical data necessary to understand the nature and magnitude of environmental problems at the site, to determine if cleanup actions are required, and to determine how these actions may be accomplished along with specific wildlife enhancement and park development actions
- Provide pre-remedial design data, evaluate these data, develop and evaluate potential remediation alternatives, and generate final design/cleanup recommendations
- Provide a preferred remedial alternative in which the area can be cleaned up and, potentially, site redevelopment objectives can be achieved
- Inform the landowners (BNSF Railway and Whatcom County), stakeholders, and the public of the results of assessment work and solicit comments regarding the remediation of environmental problems and redevelopment of the area
- Provide information for decision-making by the City, landowners, stakeholders, and the public as a framework to future decision-making for anticipated upgrades to park facilities and trail construction
- Support the City's cost-recovery efforts including the identification of any additional potentially responsible parties (PLPs) in order to facilitate their participation in the process.

The questions under study are three-fold. First is the nature and extent of contamination. Second is whether the contamination presents a threat to human health and/or the environment. Third is how it might be remediated so that humans and wildlife can use the park safely. It is possible that some media (e.g., surface water and sediments) might pose a threat while other media (e.g., soils and groundwater) do not. The threat might be to humans, ecological receptors, or both.

The nature and location of the threat would indicate the appropriate response action(s). For example, if contaminant concentrations in sediments in the Creek posed a threat to aquatic receptors in the creek, but contaminant concentrations in soils south of the creek did not, the creek could be rerouted along a more southern route (refer to Figure 1-1). If

contaminant concentrations in the old creek bed posed a threat to human health or the terrestrial environment, the old sediments could be removed or covered to control exposures. Therefore, the RI/FS will include the collection and analysis of data adequate to evaluate these and other possible remedial alternatives within the Park.

Details on specific data quality objectives (DQOs) for the RI/FS of the Park are presented in the accompanying QAPP.